

Db 3 EHVNKYTEYEARTKAETLLYERGLITPAAVDRVVSYYENEIGPMGGAKVVAKSWVDPY 62

Qy 69 KKRLLDAGTEACKELGIGGLQGEDMMWVENTDEVHHVVVCTLCSCYPWPVLGLPPNWEKE 128

Db 63 RKWLEEDATAAMASLGAGEQAHQISAVFNDSTHVVVCTLCSCYPWPVLGLPPAWYKS 122

Qy 129 PQYRSRVVREPRQLLKEEFGFEVPPSKEIKVWDSSEMRFVLPQRPAGTDGWSEELAT 188

Db 123 MEYRSRVVADPRGVLKRDFGFDIPDEVEVRVWDSSEIRYIVIPERPAGTDGWSEELAK 182

Qy 189 LVTRESMIGVEPA 201

Db 183 LVSRDSMIGVSNA 195

RESULT 4

S19714

nitrile hydratase (EC 4.2.1.84) alpha chain, H-type - Rhodococcus rhodochrous (strain J1)

N;Alternate names: H-nitrilase

C;Species: Rhodococcus rhodochrous

A;Variety: strain J1

C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004

C;Accession: S19714; S78584; S14771

R;Kobayashi, M.; Nishiyama, M.; Nagasawa, T.; Horinouchi, S.; Beppu, T.; Yamada, H.

Biochim. Biophys. Acta 1129, 23-33, 1991

A;Title: Cloning, nucleotide sequence and expression in Escherichia coli of two cobalt-containing nitrile hydratase genes from Rhodococcus rhodochrous J1.

A;Reference number: S19713; MUID:92096459; PMID:1840499

A;Accession: S19714

A;Molecule type: DNA

A;Residues: 1-203 <KOB>

A;Cross-references: UNIPROT:P21219; UNIPARC:UPI000000D661; EMBL:X64359; NID:g49057; PIDN:CAA45710.1; PID:g581528

A;Experimental source: strain J1

A;Accession: S78584

A;Molecule type: protein

A;Residues: 2-27;162-173 <KOY>

A;Cross-references: UNIPARC:UPI0000147A97; UNIPARC:UPI00001760B0

R;Nagasawa, T.; Takeuchi, K.; Yamada, H.

Eur. J. Biochem. 196, 581-589, 1991

A;Title: Characterization of a new cobalt-containing nitrile hydratase purified from urea-induced cells of Rhodococcus rhodochrous J1.

A;Reference number: S14771; MUID:91192028; PMID:2013281

A;Accession: S14771

A;Molecule type: protein

A;Residues: 2-29 <EUR>

A;Cross-references: UNIPARC:UPI00001760B1

C;Genetics:

A;Start codon: GTG

C;Function:

A;Description: catalyzes the hydration of nitrile compounds to the corresponding aliphatic amides

A;Pathway: cyanoamino acid metabolism

C;Superfamily: nitrile hydratase, alpha subunit

C;Keywords: carbon-oxygen lyase; cobalt; hydro-lyase

F;2-203/Product: nitrile hydratase alpha chain, H-type #status experimental

<MAT>

Query Match 57.3%; Score 618; DB 2; Length 203;

Best Local Similarity 57.5%; Pred. No. 2.4e-47;

Matches 111; Conservative 32; Mismatches 48; Indels 2; Gaps 1;

Qy 11 EEIQK--EITARVKALESMLIEQGILTTSMIDRMAEYENEVGPHLGAKVVVKAWTDPEF 68

Db 3 EHVNKYTEYEARTKAETLLYERGLITPAAVDRVVSYYENEIGPMGGAKVVAKSWVDPY 62

Qy 69 KKRLLDAGTEACKELGIGGLQGEDMMWVENTDEVHHVVVCTLCSCYPWPVLGLPPNWEKE 128

Db 63 RKWLEEDATAAMASLGAGEQAHQISAVFNDSTHVVVCTLCSCYPWPVLGLPPAWYKS 122

Qy 129 PQYRSRVVREPRQLLKEEFGFEVPPSKEIKVWDSSEMRFVLPQRPAGTDGWSEELAT 188

Db 123 MEYRSRVVADPRGVLKRDFGFDIPDEVEVRVWDSSEIRYIVIPERPAGTDGWSEELTK 182

Qy 189 LVTRESMIGVEPA 201

Db 183 LVSRDSMIGVSNA 195

RESULT 5

S04472

nitrile hydratase (EC 4.2.1.84) alpha chain [validated] - Rhodococcus sp.

C;Species: Rhodococcus sp.

C;Date: 21-Nov-1998 #sequence_revision 21-Nov-1998 #text_change 15-Mar-2004

C;Accession: S04472; A30463; S16606; S02070; S54105; S62095; S15071; S28887

R;Ikehata, O.; Nishiyama, M.; Horinouchi, S.; Beppu, T.

Eur. J. Biochem. 181, 563-570, 1989

A;Title: Primary structure of nitrile hydratase deduced from the nucleotide sequence of a Rhodococcus species and its expression in Escherichia coli.

A;Reference number: S04471; MUID:89276338; PMID:2659343

A;Accession: S04472

A;Molecule type: DNA

A;Residues: 1-207 <IKE1>

A;Cross-references: UNIPARC:UPI0000000958; EMBL:X14668; NID:g46429; PIDN:CAA32797.1; PID:g46430

A;Experimental source: strain N-774

A;Accession: A30463

A;Molecule type: protein

A;Residues: 2-19;47-66;144-159 <IKE2>

A;Cross-references: UNIPARC:UPI0000172FEC; UNIPARC:UPI0000172FED; UNIPARC:UPI0000172FEE

R;Nishiyama, M.

submitted to the EMBL Data Library, March 1989

A;Reference number: S16606

A;Accession: S16606

A;Molecule type: DNA

A;Residues: 1-17,'A',19-207 <NIS>

A;Cross-references: UNIPARC:UPI00001104FD; EMBL:X14668

R;Endo, T.; Watanabe, I.

FEBS Lett. 243, 61-64, 1989